



United States Patent & Trademark Office; U.S. DEPARTMENT OF COMMERCE

PTO/SB/33 (07-05)

APR 11 2007

<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>	Docket Number (Optional) 58268.00348
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]  on _____  Signature _____  Typed or printed Name _____	Application Number:  10/813,270  Filed: March 31, 2004
	First Named Inventor:  Meng-An PAN
	Art Unit: 2618
	Examiner: Nhan T. Le

**Mail Stop AF**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- ☐ Applicant/Inventor.
- ☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under  
37 CFR 3.73(b) is enclosed

☒ Attorney or agent of record.  
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☐ Attorney or agent acting under 37 CFR 1.34.  
Reg. No. is acting under 37 CFR 1.34 \_\_\_\_\_

  
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March 2, 2007  
\_\_\_\_\_  
Date

NOTE: Signatures of all of the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of \_\_\_\_\_ forms are submitted.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Meng-An PAN

Art Unit: 2618

Application No.: 10/813,270

Examiner: Nhan T. Le

Filed: March 31, 2004

Attorney Dkt. No.: 58268.00348

For: PROGRAMMABLE IF FREQUENCY FILTER FOR ENABLING A  
COMPROMISE BETWEEN DC OFFSET REJECTION AND IMAGE REJECTION

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

March 2, 2007

Sir:

In accordance with the Pre-Appeal Brief Conference Pilot Program guidelines set forth in the July 12, 2005 Official Gazette Notice, Applicants hereby submit this Pre-Appeal Brief Request for Review of the final rejections of claims 1-4 and 7-11 in the above identified application. Claims 1-4 and 7-11 were finally rejected in the Office Action dated November 3, 2006. Applicants filed a Response to the Final Office Action on December 8, 2006, and the Office issued an Advisory Action dated February 7, 2007 maintaining the final rejections of claims 1-4 and 7-11. The Advisory Action, however, indicated that the amendments filed on December 8, 2006 would be entered for purposes of appeal. Applicants hereby appeal these rejections and submit this Pre-Appeal Brief Request for Review.

The final Office Action rejected claims 1, 5-8, 12, and 13 under 35 U.S.C. §102(e) as being anticipated by Olson (U.S. Patent No. 7,050,778). Claims 5, 6, 12, and 13 were canceled. However, Applicants submit that there is clear error with regard to at least one element of claims 1, 7, and 8, upon which claims 2-4 and 9-11 are dependent.

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Applicants respectfully submit that the present claims recite subject matter which is neither disclosed nor suggested by Olson, and that, therefore, the final rejections are improper and without basis. Specifically, Olson does not disclose or suggest “wherein the filtering, measuring and adjusting is repeated until a compromise between DC offset rejection and image rejection is achieved, and wherein the compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets minimum pre-specified requirements,” as recited in claims 1 and 7. Similarly, Olson does not disclose or suggest “wherein the bandpass filter and at least one measurement circuit continue to filter, measure and adjust the center frequency until a compromise between DC offset rejection and image rejection is achieved, and wherein the compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets minimum pre-specified requirements,” as recited in claim 8.

According to embodiments of the present invention, the IF center frequency is adjusted (610) by varying resistance of the resistors 410. A received signal is then filtered (620) using a bandpass filter using the adjusted frequency. Image rejection and DC offset rejection of the filtered signal is then measured (630, 640). It is then determined (650) if the measurements are within a specific tolerance (e.g., DC offset rejection is within acceptable tolerances and image rejection meet minimum pre-specified requirements). If the measurements are within the tolerances, the method 600 ends. Otherwise, the center frequency is then adjusted (610) again and the method 600 repeats (Specification, paragraph 0031 and Figure 6). During the operation of the filter 400, the IF frequency of the filter 400 is shifted upwards to improve DC offset rejection (as shown in FIG. 5A) and downwards to improve image rejection (as shown in FIG. 5B) until a compromise is reached (Specification, paragraph 0030 and Figures 5A and 5B).

Olson, on the other hand, fails to disclose or suggest that a compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets minimum pre-specified requirements, as recited in the present claims. Olson merely discloses that “the parameters of the amplifier 1306 are adjusted so that the amplitude of

the I and Q channels are balanced, and so that the phase difference between the I and Q channels is 90 degrees” (Olson, Column 11, lines 31-34). In addition, Olson teaches that “the processor 1334 calibrates the image reject mixer 1310 to maximize the image rejection at the selected channel frequency... the relative phase-shift between the I and Q components of a LO signal 1311 is adjusted to produce the maximum I/Q balance at the output of image reject mixer 1310. In other words, the phase difference between the I and Q components of the LO signal 1311 is varied from 90 degrees to compensate for any residual I/Q imbalance that is left in the mixer 1310 after step 1502” (Olson, Column 11, lines 53-67). Therefore, Olson only discloses that image rejection is maximized at the selected channel frequency and that the relative phase-shift between the I and Q components is adjusted to produce the maximum I/Q balance at the output of image reject mixer.

Olson makes no mention of reaching a compromise between DC offset rejection and image rejection, and that the compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets minimum pre-specified requirements. Thus, Olson fails to disclose or suggest all of the elements of claims 1, 7, and 8. Therefore, Applicants respectfully assert that the final rejection is clearly improper and without basis. As such, Applicants respectfully request that the rejection of claims 1, 7, and 8 be withdrawn.

Claims 2-4 and 9-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Olson in view of Vinn (U.S. Patent No. 6,441,682). Applicants submit that there is clear error with regard to at least one element of claims 2-4 and 9-11.

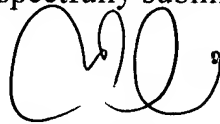
Applicants note that claims 2-4 and 9-11 are dependent upon claims 1 and 8, respectively. Additionally, Vinn fails to cure the deficiencies in Olson with respect to claims 1 and 8, as discussed above, since Vinn also fails to disclose or suggest “wherein the filtering, measuring and adjusting is repeated until a compromise between DC offset rejection and image rejection is achieved, and wherein the compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets

minimum pre-specified requirements.” Accordingly, the combination of Olson and Vinn fails to disclose or suggest all of the elements of claims 2-4 and 9-11. Furthermore, claims 2-4 and 9-11 should be allowed for at least their dependence upon claims 1 and 8, and for the specific limitations recited therein.

For at least the reasons discussed above, Applicants respectfully assert that there is clear error in that the Office Action has failed to establish a prima facie case for anticipation or obviousness, as the cited references of Olson and Vinn do not disclose or suggest all of the elements of the presently pending claims. It is therefore respectfully requested that all of claims 1-4 and 7-11 be allowed, and this application passed to issue.

Reconsideration and withdrawal of the rejections, in view of the clear errors in the Office Action, is respectfully requested. In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: PTO/SB/33 Form  
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